



SBlnet Systems Program Office Risk/Issue/Opportunity Management Plan

Version 1.3


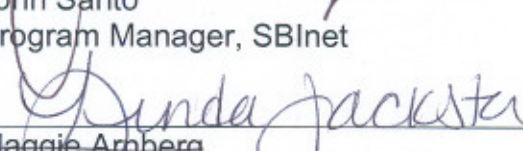
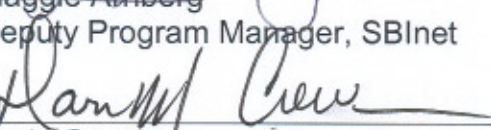
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SBlnet Systems Program Office

Approvals

The Risk, Issue and Opportunity (RIO) Management Plan provides the strategy, roles and responsibilities and process as they pertain to implementing and executing RIO management for the SBInet Program. This plan and related material will assist the SBInet Systems Program Office to address RIO management in a structured, continuous manner.

Approved by:		6/6/08
	John Santo	Date
	Program Manager, SBInet	
Approved by:		6/6/08
	Maggie Amberg	Date
	Deputy Program Manager, SBInet	
Approved by:		6/6/08
	Darin Cowen	Date
	SBInet Risk Manager	

Record of Changes

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1	01/11/07	Complete Document	A	Initial Submission	NA
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Executive Summary

This plan describes a comprehensive, open and joint management approach to achieving SBInet management, technical and operational objectives. The approach is comprehensive by including risks, issues and opportunities; open by including all program participants; and joint by actively providing an equal role for the Prime Contractor. This plan provides the strategy, roles and responsibilities and processes to effectively achieve SBInet objectives through effective RIO management.

1. Introduction

1.1 Purpose

Risk/Issue/Opportunity (RIO) management is a program management element that assesses and mitigates events that might adversely impact the program. Proper RIO management reduces or eliminates the probability or consequence of unfavorable events and increases or enhances the probability or consequence of positive events. This Secure Border Initiative Network (SBInet) RIO Management Plan describes methods for identifying, analyzing, prioritizing, managing and reporting risks, issues and opportunities. It identifies the process and assigns specific responsibilities for the management of risks, issues and opportunities and prescribes the documenting, monitoring and reporting process to be followed.

1.2 Scope

As a part of the overall SBInet program management strategy, the scope of RIO management applies to all aspects of the SBInet Program including, but not limited to, program, operational, and project activities. All participants are responsible for applying this process to their respective products and projects within the scope of the program mission. The RIO Management Plan reflects SBInet's adherence to industry best practices, and is consistent with guidance from Customs and Border Protection (CBP) and Department of Homeland Security (DHS)

1.3 Audience

As defined in the SBInet Risk Management Policy, RIO management applies to the SBInet Systems Program Office (SPO) participants, prime contractor and their subcontractors. This plan is also intended to address the needs of both internal and external SBInet Program stakeholders.

1.4 Referenced Documents

The SBInet Risk Management Policy establishes the requirements to identify and control program risks which may adversely affect cost, schedule, and performance thresholds and establishes key risk management responsibilities within the SBInet SPO.

The Joint RIO Management Process defines how risk, issue and opportunity management is performed for the SBInet Program, defining the systematic approach of identifying and processing program/project risks, issues and opportunities.

The Boeing Opportunity Risk and Issue System (BORIS) User manual is the instruction manual for the program RIO database.

The Boeing Risk Issues and Opportunity Management (PRO-5536) is the company procedure for RIO management.

Document	Document Number
SBI-net Risk Management Policy v0.2	RM-POL-036
Joint RIO Management Process	RM-PRO-034
Boeing Opportunity, Risk and Issue System (BORIS) User Guide	D6-8328183281 Rev NEWA (August, 23, 2006)
Boeing Risk Issues and Opportunity Management	PRO-5536 (March 21, 2006)
PMBOK 3rd Edition v1.3	ANSI /PMI 96-001-2004
Capability Maturity Model Integration (CMMI)	CMMI Version 1.2 (Nov 2007)

1.5 Document Organization

This document is organized as follows:

Section	Purpose
Section 1: Introduction	Defines the purpose, scope and organization of this plan, and identifies the related plans or documents that are incorporated into this plan by reference.
Section 2: RIO Management Strategy	Describes the strategy adopted including principles, goal and success factors.
Section 3: RIO Roles and Responsibilities	Identifies the players and describes their respective responsibilities.
Section 4: RIO Management Execution	Defines terms, details the process and discusses communicating and reporting to proactively manage RIOs.
Appendix A	Acronyms
Appendix B	RIO Criteria

2. RIO Management Strategy

This section includes the strategy for the RIO management including guiding principles, goals, and critical success factors.

2.1 Guiding Principles

The SBInet Program has adopted guiding principles to support the implementation and execution of RIO management.

Stakeholders must be proactively involved in the processes and procedures for effective RIO management. For purposes of RIO management, SBInet stakeholders include all those with a vested interest in the success of the SBInet program. SBInet program stakeholders include, but not limited to, SBI Program participants (e.g. SBInet SPO, user representatives, Prime Contractor, Subcontractors) and participants from other organizations (e.g. SBI, CIO, CBP, and DHS).

Continuous improvements to RIO management will be incorporated over time as the SBInet program matures. This principle will be revisited to verify that processes are producing desired results and to assist in identifying needed improvements to the overall RIO management.

2.2 RIO Management Goal

The goal of RIO management is to progressively achieve the program's mission by reducing exposure to risk and issue events.

2.3 Critical Success Factors

Success factors critical to effective RIO management are:

- Effective Communication of RIO management
- Commitment of management and their staff to RIO management
- Disciplined use of processes and tools

2.4 Joint Effort with Prime Contractor

Effective RIO management requires a close partnership between the SBInet Program and the Prime Contractor. The overall RIO management promotes information sharing between the two organizations, ensures the appropriate use of information definitions and standards and ensures data is transferred efficiently and interpreted consistently.

RIO management monitors risk management activities, and coordinates communication of risks within the SBInet Program and facilitates interface with the Prime Contractor including the subcontractors to establish joint risk reporting standards and periodic reviews of data and measures.

2.5 Legislative and Oversight Requirements and Guidance

Risk management is required by various laws and oversight directives. The following legislative and oversight requirements, among others, apply to implementing risk management:

- The Clinger-Cohen Act¹ requires agencies to have a process for assessing and managing the risks of their information technology acquisitions.
- Office of Management and Budget (OMB) Circular A-130 requires agencies to establish and maintain a capital planning and investment control process that identifies and mitigates risks associated with each information system.
- The Federal Acquisition Regulation requires risk management. FAR 39.102 states, in part, that (1) Agencies should analyze risks, benefits, and costs prior to contracting for IT, and (2) Contracting and Program Office officials are jointly responsible for assessing, monitoring, and controlling risk when selecting projects and during program implementation.

GAO also emphasizes risk management for managing high investment programs. Risks of all major programs should be monitored and risk information and handling plans should be updated regularly and considered as part of the periodic management reviews of projects during the development phase.

The SBInet Program has taken steps to comply with these requirements and guidance. Risk assessment is a continuous process as described in this plan and part of programmatic milestone reviews.

3. RIO Roles and Responsibilities

The following roles and responsibilities support the execution of RIO management. Specific roles and responsibilities are further defined and detailed in the RIO Process documentation.

3.1 All Team Members

SBInet program participants including SBInet SPO, User Representatives and Prime Contractor and Subcontractors, are responsible for identifying risks, issues and opportunities and assisting in determining impact, likelihood, impact dates and response plans.

3.2 Joint Risk Review Board (JRRB)

The JRRB, co-chaired by SBInet SPO and Prime Contractor Program Managers, serves as formal decision making body for RIO management oversight and execution at the program and project levels. This includes responsibility for the overall success of the

¹ The Clinger-Cohen Act of 1996 (also known as the Information Technology Management Reform Act, Division E of Public Law 104-106).

RIO management effort including the identification of resources required to implement effective RIO activities. The JRRB may also elevate risks outside of the program's control to external stakeholders.

3.3 SBInet Functional and Project Managers

SBInet Functional and Project Managers (SPO and Prime Contractor) are responsible for the detailed management and handling of their respective risks, issues, and opportunities. Each is a member of the JRRB.

3.4 RIO Management Team (RMT)

The RMT, led by SBInet SPO and Prime Contractor RIO Managers, provides guidance for the overall process and execution at the program level and within individual projects. This includes monitoring program and project RIO activities to ensure they are consistent with processes and procedures and ongoing process improvement. If required, RMT leaders may approve candidate risks or opportunities.

3.5 RIO Focals

As the functional/project teams are established, RIO focals are identified. Their responsibilities include RIO data maintenance item status and guidance for their respective teams. Each risk focal is a member of the RMT.

3.6 Prime Contractor

The Prime Contractor is responsible for providing the tools, training and support to achieve RIO objectives. This includes the RIO management tool, tool functionality and access to program personnel and resources required to support this plan.

4. RIO Management Execution

RIO management execution describes how SBInet organizes its RIO activities to identify measure, analyze, and assess RIO information on a program basis. The focus of the SBInet RIO management approach is to apply continuous RIO management throughout the lifecycle. It provides a disciplined environment for proactive decision making to:

- Continually assess what could go wrong or be advantageous (i.e. risks and opportunities)
- Prioritize risks and determine the overall risk exposure of the program
- Implement strategies to deal with identified risks to reduce risk exposure
- Assess and measure the effectiveness of the implemented strategies

Figure 1 illustrates the RIO management execution established by the SBInet Program.

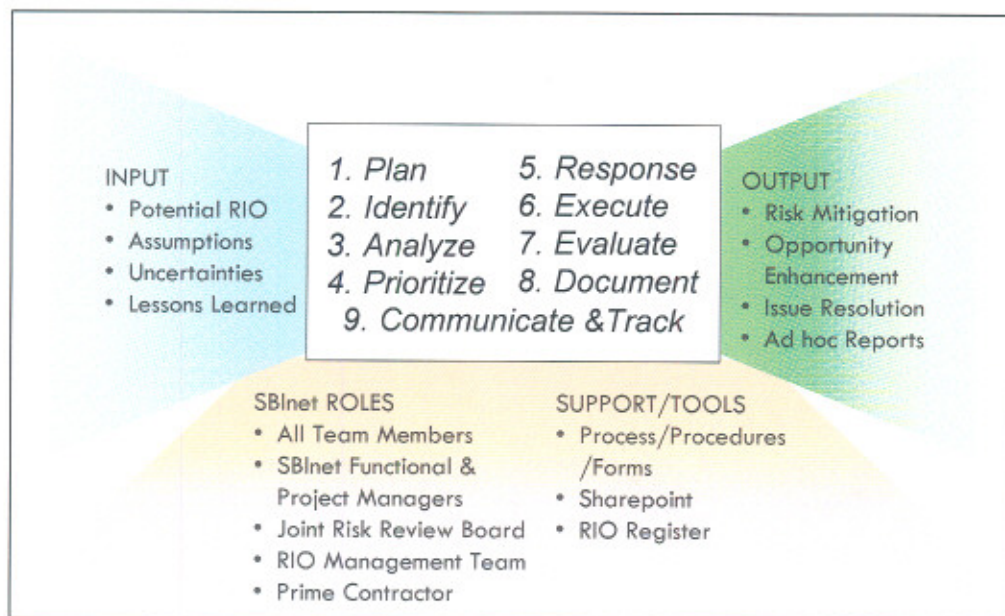


Figure 1 RIO Management Execution Overview

4.1 Definitions

Key definitions for RIO management include:

- **Risk:** A risk is defined as an uncertain event or condition that, if it occurs, will have a negative effect or impact on at least one program/project objective, such as time (schedule), cost, scope or technical performance.
- **Issue:** An issue is an event or condition that currently exists (or has a 100% future certainty of occurring) and has a negative effect or impact on at least one program/project objective, such as time (schedule), cost, scope or technical performance. An issue can also be described as a risk that has been realized, whether the risk was initially identified or not.
- **Opportunity:** An opportunity is defined as an event, condition or circumstance that, if captured, will have a positive effect on at least one program/project objective, such as time (schedule), cost, scope or technical performance. The result of opportunity management is a potential cost savings, time savings (improved schedule), improved quality, or an increase or benefit to technical performance objectives.

4.2 RIO Management Process

The Joint RIO Management Process is consistent with this approach and provides more detailed descriptions for executing RIO management activities. This process applies to all aspects of the SBInet Program including, but not limited to, program, operational, and project activities. All participants are responsible for applying this process to their respective products and projects within the scope of the program mission.

The RIO best practices for risk management activities (as illustrated in figure 1) are:

- Plan:** Plan a risk management approach, guided from the enterprise, to start during the initiating phase of a program or project.
- Identify:** Identify risks before they develop into problems, or early enough to take advantage of opportunities. Risks are continuously identified throughout the program and project life cycles.
- Analyze:** Risk analysis is to determine likelihood and impact of risks.
- Prioritize:** Rank the risks in order of importance to develop a portfolio and calculate a risk exposure.
- Response:** Decide the most effective method for handling risks and planning a mitigation strategy if applicable.
- Execute:** Perform the identified actions at the appropriate time.
- Evaluate:** Assess the results of the actions and all risks periodically.
- Document:** Record status of actions taken, and close and archive obsolete risks.
- Communicate and Track:** Provide stakeholders with RIO status and related information to achieve the purpose of this plan.

These RIO activities form (illustrated in figure 2) the basis for the RIO process implemented on SBInet Program. This process flow demonstrates the systematic and continuous approach utilized.

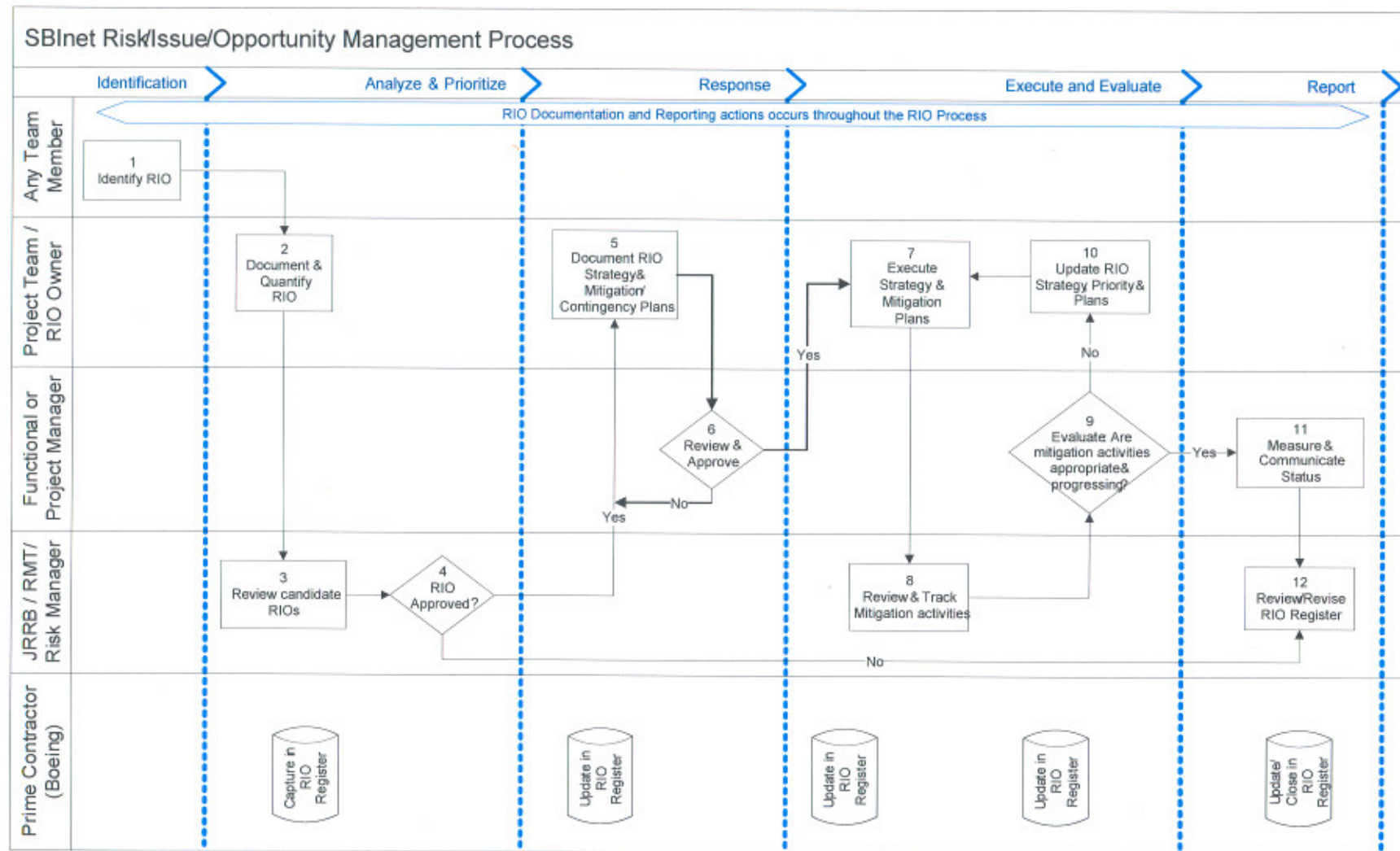


Figure 2. RIO Management Process

For each risk or issue, the likelihood and consequence of occurrence are quantified. Likelihood is defined as the probability that a risk will occur. Issues have a 100% likelihood of occurrence or have already occurred. Consequence is defined as an unfavorable result of the risk or issue should no action be taken. Risk levels, identified as high, moderate and low (illustrated in figure 3), are based on the likelihood and consequence criteria provided in Appendix B. RIO handling strategies, including mitigation/contingency plans where appropriate, are developed for all approved risks and issues. Successful execution of the handling strategies leads to RIO closure. The RIO closure criteria are provided in Appendix B.

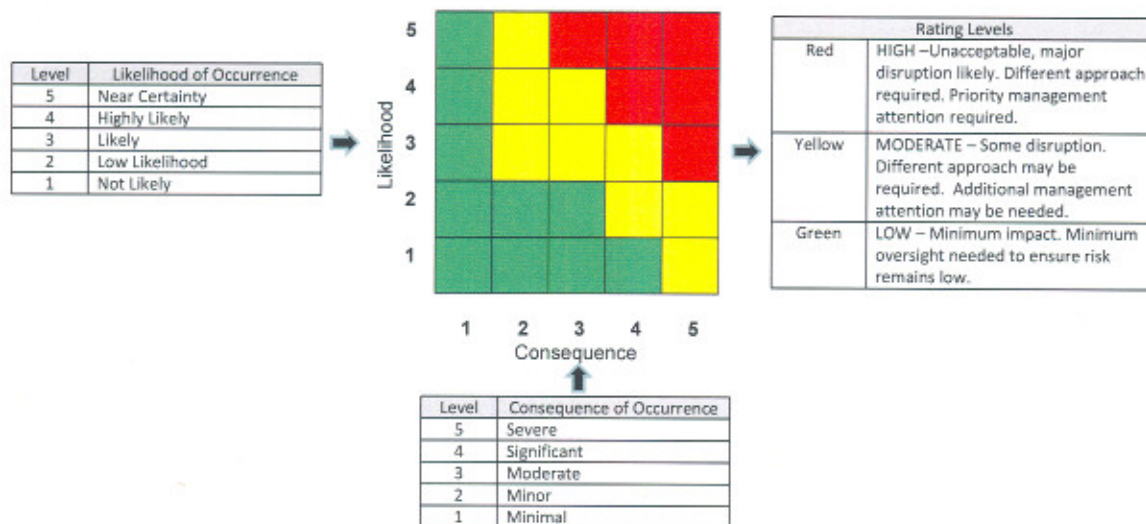


Figure 3. Likelihood and Consequence Risk and Issue Matrix

4.3 RIO Management Communication

RIO management communication is the process of recording and conveying to responsible parties the progress and results of the risk, issue, and opportunity management processes. Communication includes both Internal and external participants.

Internal communication encompasses the monthly JRRB meeting, weekly PMR, monthly JPMR, monthly RIO RMT meetings and regular functional and project team meetings in addition to recurring informal communications.

External communication principally involves RIO information exchange with the Executive Steering Committee (ESC) which fulfills the requirement to transmit high risk program information to the Component and DHS investment decision makers.

Reports are generated as required to satisfy both internal and external communication needs. RIO reports include system generated (from BORIS), monthly status and ad hoc reports as required.

4.4 RIO Management Information System

The ability to share information is a key enabler for an effective risk management program. Information needs to be easily accessible in a timely fashion by project teams, program staff, and executives. SBInet has identified a database with the Prime Contractor to provide the SBInet Program RIO Register and document RIO identification and mitigation activities. All risks for the SBInet Program are documented and maintained in one database. The SBInet SPO works collaboratively with the Prime Contractor to maintain and update the database.

4.5 Training

The RMT will develop and provide training material to ensure the SBInet Program participants receives training to perform RIO activities as well as coaching and training as appropriate. Training materials will be revised and, where necessary, refresher training provided.

Appendix A. Acronyms

BORIS	Boeing Opportunity Risk and Issue System
CBP	Customs and Border Protection
CIO	Chief Information Office, DHS
CMMI	Capability Maturity Model Integration
DHS	Department of Homeland Security
JRRB	Joint Risk Review Board
PMBOK	Program Management Book of Knowledge
PMI	Program Management Institute
RIO	Risk/Issue/Opportunity
RMT	RIO Management Team
SBI	Secure Border initiative
SBI-net	Secure Border Initiative Network
SPO	Systems Program Office

Appendix B. RIO Criteria

The Boeing Company	
Boeing Opportunity, Risk and Issue System	
Likelihood	
What is the likelihood the Risk will happen?	
Level	General
<u>5</u> Near Certainty	<u>Almost always encountered; practically unavoidable risk that invariably requires mitigation efforts</u>
<u>4</u> Highly Likely	<u>Expected to occur; typically occurs in efforts of a similar nature</u>
<u>3</u> Likely	<u>Even likelihood of occurrence; often encountered in similar efforts</u>
<u>2</u> Low Likelihood	<u>Hypothetically possible, but uncommon in programs of similar type</u>
<u>1</u> Not Likely	<u>Rarely encountered; standard practices will effectively avoid or mitigate this risk</u>
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Figure B1. Risk Likelihood of Occurrence Criteria

BORIS - Consequence Select - Internet Explorer provided by Customs & Border Protection v 1.3					
The Boeing Company					
Boeing Opportunity, Risk and Issue System					
Consequence					
What is the consequence if the Risk happens?					
Level	1 Minimal	2 Minor	3 Moderate	4 Significant	5 Severe
Technical	Minimal or no impact	Minor performance shortfall; all requirements still met	Moderate performance shortfall; significant reduction in margin	Significant decrease in system technical performance; eliminates all margin; mission success questionable	Severe decrease in system technical performance; critical system requirements not achieved; mission success unattainable
Schedule	Minimal or no impact	Some schedule slips that are recoverable at program level; no major program delivery impacted; able to meet key dates	Minor schedule slip; will miss need date; may slightly impact upcoming program delivery	Program critical path affected; upcoming major program delivery impacted	Cannot achieve key program milestone; subsequent schedule significantly impacted
Cost	Minimal or no impact	Budget increase or unit production cost increase <1%; sufficient management reserves available	Budget increase or unit production cost increase <5%; funding increase may be necessary	Budget increase or unit production cost increase <10%; management reserves inadequate to cover	Budget increase or unit production cost increase >10%; cost growth greatly exceeds authorized budget; large funding increase necessary
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Figure B2. Risk Consequence Criteria

BORIS - Consequence Select - Internet Explorer provided by Customs & Border Protection v 1.3

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Boeing Opportunity, Risk and Issue System

Consequence

What is the impact of the Issue?

Level	1 Low	2 Minor	3 Moderate	4 Significant	5 High
General	<u>Minimal or no impact; root cause analysis / resolution plan not required</u>	<u>Minor impact; root cause analysis required; resolution plan optional</u>	<u>Moderate impact; root cause analysis required; resolution plan recommended</u>	<u>Major impact; root cause analysis / resolution plan required, alternate plan optional</u>	<u>Program objectives or milestones unattainable; root cause analysis / resolution plan required, alternate plan required</u>
Technical	<u>Existing processes/practices can be utilized, some work-arounds may be required. Negligible performance shortfall or deviation in quality metrics</u>	<u>Minor redesign or production changes required. Minor performance shortfall or deviation in quality metrics</u>	<u>Design or production process changes required, but feasible. Moderate performance shortfall or deviation in quality metrics</u>	<u>New design or production approach required. Significant performance shortfall or deviation in quality metrics</u>	<u>Design or production requirements not documented or understood. Performance or quality targets unattainable</u>
Schedule	<u>Minimal or no Impact</u>	<u>Additional activities required; able to meet key dates</u>	<u>Moderate Schedule slip; will miss need date</u>	<u>Program critical path affected</u>	<u>Cannot achieve key program milestone</u>
Cost	<u>Minimal or no Impact</u>	<u>Budget or unit production cost increase <1%</u>	<u>Budget or unit production cost increase <5%</u>	<u>Budget or unit production cost increase <10%</u>	<u>Budget or unit production cost increase >10%</u>

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Figure B3. Issue Consequence of Occurrence Criteria

BORIS - Likelihood Select - Internet Explorer provided by Customs & Border Protection ...

The Boeing Company		Boeing Opportunity, Risk and Issue System	
Likelihood			
What is the likelihood the Opportunity will happen?			
Level	General		
5 Near Certainty	Planned approach and processes will effectively capture this opportunity utilizing standard practices		
4 Highly Likely	Planned approach and processes have usually captured this type of opportunity with minimal oversight in similar cases		
3 Likely	Planned approach and processes may capture this opportunity, but additional actions may be required		
2 Low Likelihood	Planned approach and processes cannot capture this opportunity, but a different approach might		
1 Not Likely	Planned approach and processes cannot capture this opportunity utilizing standard practices		

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Figure B4. Opportunity Likelihood Criteria

BORIS - Consequence Select - Internet Explorer provided by Customs & Border Protection v 1.3

The Boeing Company **Boeing Opportunity, Risk and Issue System**

Consequence

What is the consequence if the Opportunity happens?

Level	1	2	3	4	5
Technical	Minimal increase in performance	Minor increase in performance	Moderate increase in performance	Significant increase in performance	Performance increase supports major program objective
Schedule	Minimal or no impact on improving delivery or parts schedule	Minor improvement in delivery or parts schedule	Moderate improvement in delivery or parts schedule	Major improvement in delivery or parts schedule	Improvement supports meeting major milestone or eliminates obstacle to scheduled delivery
Cost	Minimal or no impact	Reduces recurring, non-recurring, or operating & support costs by <1%	Reduces recurring, non-recurring, or operating & support costs by <5%	Reduces recurring, non-recurring, or operating & support costs by <10%	Reduces recurring, non-recurring, or operating & support costs by >10%

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Figure B5. Opportunity Consequence Criteria

BORIS - Risk Closure Select - Internet Explorer provided by Customs & Border Protection v...

The Boeing Company BOEING

Boeing Opportunity, Risk and Issue System


The Risk is being closed for the following reason:	
1	The risk mitigation plan was successful and the risk has been eliminated.
2	The risk has been eliminated by other events.
3	The risk mitigation plan has been unsuccessful and the risk has been realized – the risk should be transferred to the CLCA (Issue/Action Item) Process
4	Additional mitigation is not cost effective and the risk level is judged to be acceptable.
5	The risk is not required for administrative reasons; the risk can't be validated, the risk is redundant with other risks, the risk is combined with other risks or the risk is being split into several risks.

[Close](#)

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Figure B6. Risk Closure Criteria

BORIS - Issue Closure Select - Internet Explorer provided by Customs & Border Prot...

The Boeing Company Boeing Opportunity, Risk and Issue System 


The Issue is being closed for the following reason:

1	The resolution plan has been completed and has been validated as effective in resolving the issue.
2	The issue has been eliminated by other events.
3	The issue is not required for administrative reasons; the issue can't be validated, the issue is redundant with other issues, or the issue is combined with other issues.

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Figure B7. Issue Closure Criteria

BORIS - Opportunity Closure Select - Internet Explorer provided by Customs & Border Protection v 1.3

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Boeing Opportunity, Risk and Issue System

The Opportunity is being closed for the following reason:	
1	The achievement plan was successful and the opportunity has been realized.
2	The opportunity has been eliminated by other events.
3	The achievement plan has been unsuccessful and the opportunity will not be realized. – Consider transferring the opportunity to the Issue and Action Item Process for further consideration.
4	Completion of additional achievement plan steps is not cost effective and the opportunity level is judged to be acceptable.
5	The opportunity is not required for administrative reasons; the opportunity can't be validated, the opportunity is redundant with other opportunities, the opportunity is combined with other opportunities or the opportunity is being split into several opportunities.

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Figure B8. Opportunity Closure Criteria